GASTROINTESTINAL DISORDERS – Cost Studies

PGI2

CHRONIC HEPATITIS C VIRUS (HCV) TREATMENT COSTS IN THE TERTIARY REFERENCE HOSPITAL DAS CLíNICAS—UNIVERSITY OF SãO PAULO SCHOOL OF MEDICINE (HC-FMUSP)

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OBJECTIVES: Hepatitis C virus treatment is based on the use of Pegylated or Convencional Interferon combined with Ribavirin according to HCV genotype in Brazil. During this treatment usually it is observed adverse events that may need additional medications leading to increased demand on health resources. The aim of this study was to evaluate the impact of the costs of the additional drugs used by chronic HCV patients during the treatment with Pegylated or Convencional Interferons combined with Ribavirin. **METHODS:** It was used a retrospective cohort of HCV patients receiving medication from the Pharmacy Division and followed at the Clinical Hepatology Unit from the HC-FMUSP. Using the SIGHTM (Sistema de Informação e Gestão Hospitalar)—PRODESP (Tecnologia da Informação), 117 patients were identified as receiving treament for chronic HCV during the period of June 2005 and August 2007. Costs were determined using the Sistema de Administração de Materiais (SAM) from the HC-FMUSP and were compared to Câmara de Regulação do Mercado de Medicamentos, ABC-Farma e DATASUS. Comercial USD = R$2.31. **RESULTS:** The total cost of convencional interferon 3 million UI was US$12,736.76, peginterferon 2a 180 mcg US$168,739.74 and peginterferon 2b 80 mcg US$223,325.09. The concomitant medications were US$33,806.66 using the price from the SAM, while the value from the CMED would be US$557,572.16. The total cost of medications used by these patients was US$433,608.26, and 7.71% was due to concomitant medications. **CONCLUSIONS:** There is a great difference among the source of prices to evaluate cost of treatment and concomitant medications should be considered in evaluation of chronic hepatitis C patients.

PGI3

COST-EFFECTIVENESS OF PEG-IFN ALPHA 2A OR 2B PLUS RIBAVIRIN IN THE TREATMENT OF CHRONIC HEPATITIS C IN MEXICO

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OBJECTIVES: To compare the cost-effectiveness of peginterferon alpha 2a or alpha 2b, plus ribavirin, in the treatment of Hepatitis C virus chronic infection, from an institutional perspective, in the Mexican setting. **METHODS:** Using a decision tree, a Hepatitis C virus chronic infection 1-year treatment was modeled. The effectiveness of each treatment against genotypes 1, 2, or 3 was obtained using a previously published meta-analysis; the effectiveness measure was the percentage of patients who obtained a sustained viral response. Epidemiological data were included for genotype population distributions in Mexico. The utilized health care resources were derived from the Hepatitis C National Consensus and records from a reference hospital, whereas costs were obtained from purchasing records from a public institution. Costs were estimated using prices of 2008 and are expressed in US dollars (exchange rate of 11.14 pesos/ 1 US$). **RESULTS:** The cost for drugs accounted for over 80% of total treatment cost. Average costs per patient treated were: $8,422.16 for peginterferon alpha 2b + ribavirin vs. $9452.59 for peginterferon alpha 2a + ribavirin. Effectiveness achieved in obtaining a case with sustained viral response for peginterferon alpha 2b + ribavirin was 12% higher compared to peginterferon alpha 2a + ribavirin. Average cost–effectiveness ratios corresponding to cost per patient with sustained viral response were $14,921.42 for peginterferon alpha 2b + ribavirin: and $21,221.53 for peginterferon alpha 2a + ribavirin. Incremental cost–effectiveness ratios obtained in the model show peginterferon alpha 2b + ribavirin treatment as the most cost–effective or dominant strategy, since using peginterferon alpha 2a + ribavirin has a cost of $8658.28 pesos for an additional patient to present sustained viral response. **CONCLUSIONS:** Ribavirin plus peginterferon alpha 2b combination was the most cost-effective treatment, in the Mexican context, according to the proposed decision tree model.

GASTROINTESTINAL DISORDERS – Health Care Use & Policy Studies

PGI4

ESTUDO FARMAECONÔMICO DA INTERVENÇÃO FARMACÊUTICA NA UTILIZAÇÃO DO OMEPRAZOL EM UTI

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OBJETIVOS: Efetuar estudo farmacoeconômico da racionalização da prescrição do omeprazol na Unidade de Terapia Intensiva (UTI) da Neurologia de um Hospital geral, com especialidades terciárias, publicas e de grande porte pela intervenção farmacêutica, diminuindo o gasto e sistematizando o uso do omeprazol em todas as vias de administração. **MÉTODOS:** Estudo transversal, prospectivo das prescrições e prontuários médicos de pacientes internados na UTI da Clínica de Neurologia, no período de 15 de julho de 2008 a 31 de outubro de 2008. Os instrumentos utilizados foram planilhas do Excel®2003 e ficha de interconsulta, preenchida pelo farmacêutico, onde eram anotadas as intervenções efetuadas junto ao médico, para alteração da forma farmacêutica IV para oral (VO) ou por sonda nasoenteral (SNE) se o paciente apresentasse condições de deglutição ou se estivesse utilizando SNE. Para a avaliação farmacoeconômica efetuou-se a diferença entre os valores dos tratamentos intravenosos, por sonda SNE e VO. **RESULTADOS:** A média de idade e de internação foi 48.8 anos e 15.2 dias respectivamente. Dos 92 pacientes internados no período de estudo, 2 não utilizavam omeprazol (critério de exclusão) e 90 utilizavam omeprazol IV como profilaxia de úlcera de estresse. Foram efetuadas 58 intervenções farmacêuticas, das quais 25 (43%) não foram aceitas, pois 18 não possuíam acesso por via oral ou por SNE e 7 tiveram alta hospitalar. Foram aceitas 33 intervenções, sendo 16 (48.5%), mudaram de IV para via oral e 17 (51.5%) mudaram de IV para SNE. O valor total do tratamento sem a intervenção farmacêutica seria R$ 10,928.34, com a intervenção o valor gasto foi de R$ 2,738.03. **CONCLUSÕES:** A intervenção farmacêutica na Unidade de Terapia Intensiva diminuiu a utilização do omeprazol IV, e o estudo farmacoeconômico demonstrou que a economia no período analisado, quanto ao uso de omeprazol na UTI foi R$ 8,190.31 (74.9%).

PGI5

WHAT ARE THE COSTS FOR NON-COMPLIANCE WITH GUIDELINES FOR TREATMENT OF CHRONIC HEPATITIS C?

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OBJECTIVES: This analysis evaluates impact on costs for treatment of patients with Chronic Hepatitis C (CHC), in case that valid guidelines are not followed. **METHODS:** A retrospective analysis of patients data, year 2004, from 15 Slovak hepatology centers was used. Data for respective costs were collected from published sources. Decision tree model was developed to evaluate overall costs when quantitative HCV RNA test is used for treatment termination. Costs in Euro were calculated with official exchange rate €30,126 Sk. **RESULTS:** Published national guidelines for CHC required examination of quantitative HCV RNA after 12 weeks of treatment in patients with genotype 1 to detect early virological response (EVR) and treatment termination in case of negative results of EVR. Quantitative HCV RNA test was not performed, because it was not reimbursed by insurance companies at that time. Omission of EVR examination led to ungrounded prolongation of treatment in patients without EVR response. From the group of 140 patients with chronic hepatitis there were 94 patients with CHC (average age 41 years, weight 73 kg). Genotype 1 was confirmed in 57 patients, genotype 2 and 3 in 33 patients and unknown genotype in 4 patients. Patients were treated with combination of pegylated interferon alpha and ribavirin. Total treatment costs for 57 patients with HCV genotype 1 were €1,672,393. Decision tree model taking into account EVR results (followed by appropriate treatment termination) calculated that treatment cost in this group of 57 patients would be €1,378 273. **CONCLUSIONS:** Significant saving of costs could be achieved when valid treatment guidelines for CHC are followed in everyday practice. In analyzed group of 57 patients with HCV genotype 1, this savings would be €294,120. This study underline importance of preparation and implementation of clinical practice guidelines in national health and drug policy.

HEALTH CARE INTERVENTIONS – Cost Studies

PHC1

COST-EFFECTIVENESS COMPARISON OF TENSION FREE VERSUS TENSION METHODS: OF INGUINAL HERNIA REPAIR IN BRAZIL

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OBJECTIVES: The objective of this study was to compare the cost-effectiveness of open mesh versus open non mesh inguinal hernia repair in Brazil from private hospital and private payer perspectives. **METHODS:** Cost-effectiveness of open mesh vs open non mesh repair was modeled using a Markov model. Model was evaluated as a cohort simulation for a time horizon up to 15 years. Transition probabilities were derived from systematic review and other published sources. Resource utilization data were collected from two private hospitals and a private payer in Brazil. Utility values were extracted from published sources. Both costs and outcomes were discounted annually at 5%. **RESULTS:** Over both a five and fifteen year period, open mesh repair provides greater benefits in terms QALYs and fewer recurrences at a cumulatively higher cost than open non mesh repair procedures. Over a 5 and 15-year time frame, cost per one additional QALY is R$17,843 and R$2,991 respectively from a payer perspective and R$12,825 and R$957 respectively from a hospital perspective. Similarly, the cost per one recurrence avoided is 1162 R$ and R$245 in a five and fifteen years time horizon from payer perspective (R$836 and R$79 respectively from a hospital perspective). Results in the probabilistic sensitivity analysis were similar to deterministic analysis. In the five year perspective open mesh repair is more cost effective in comparison to open non mesh repair when the value for society's willingness to pay threshold for a QALY exceeds R$8000 for a life year (Zero R$ in the 15 years in both perspectives). **CONCLUSIONS:** Findings suggest that in Brazil, open mesh inguinal hernia repair is cost effective from both private hospitals and private payer perspectives and should be considered standard of care based on superior outcomes and costs.